

Notice of Allowability

Application No.

10/731,018

Examiner

HOAN C. NGUYEN

Applicant(s)

IWASA, TAKAYUKI

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed on 10/12/2007.
2. ☒ The allowed claim(s) is/are 6-10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Claims 1-5 and 11-15 have been cancelled.

Allowable Subject Matter

Claims 6-10 are allowed.

Reasons for Allowance

Claim 6 is allowed since there is no prior art teaches a reflective liquid crystal display comprising

- reflective pixel electrodes 30 provided for the respective pixels and having first openings 30a therebetween to be electrically isolated from one another;
- light blocking metal films 28 formed between the semiconductor substrate and the reflective pixel electrodes for the respective pixels and having first portions 91, second portions 92, and second openings 28a, each second opening bound on one side by a respective first portion and on the other side by a respective second portion, the second openings electrically isolate the first portions from the second portions (shown in new Figure 12), wherein the second openings do not face the first openings, and the light blocking metal films block at least part of light which is part of light which has transmitted through the transparent substrate and which has intruded into the light blocking metal films side through the first openings;
- light blocking metal-containing films 33 formed between the semiconductor substrate and the reflective pixel electrodes for the respective pixels and

electrically isolated from one another, wherein the light blocking metal-containing films 33 are electrically connected to the first via holes Via3 and cover the second openings of the light blocking metal films 33 in order to prevent the light which has intruded into the light blocking metal films side through the first openings from reaching the switching elements through the second openings.

Claims 7-10 are allowed since they depend on the allowed claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Okuda et al. (US6593983B2) disclose a reflective liquid crystal display comprising reflective pixel electrode 32 having the opening and connecting to the reflecting layer 29; reflection preventing film 26 between reflective pixel electrode and the reflecting layer 29.

Cacharelis (US006437839B1) discloses a reflective liquid crystal display comprising reflective pixel electrode 214 having the opening and connecting to the reflecting layer 224.

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Yasukasa (US007158205B2) disclose a reflective liquid crystal display comprising reflective pixel electrode connecting to an auxiliary bonding wire and the reflecting layer 12 between reflective pixel electrode and an auxiliary bonding wire.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (571) 272-2296. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HOAN C. NGUYEN
Examiner
Art Unit 2871

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ANDREA SCHUCHTER
PATENT EXAMINER